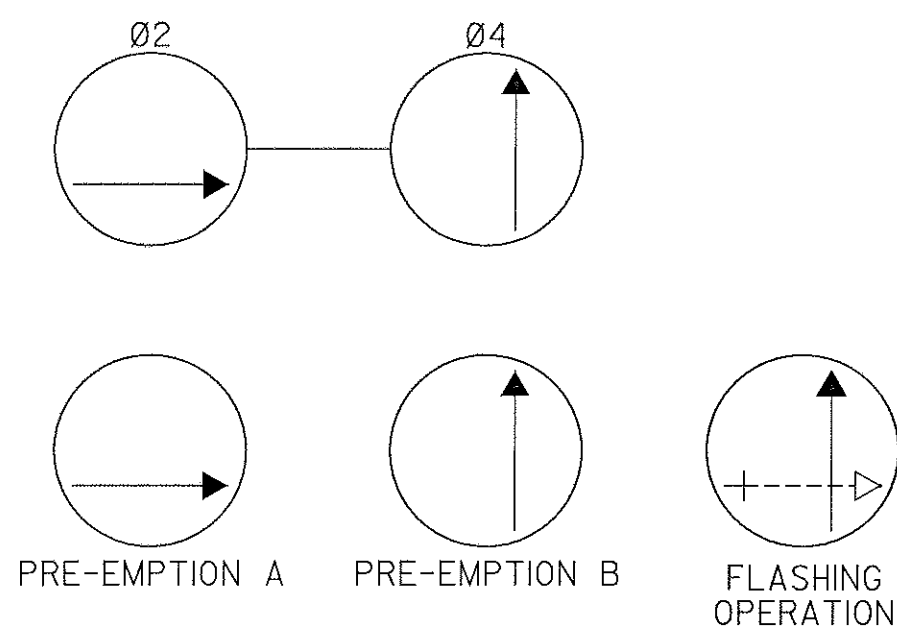


RANDOLPH AVENUE IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION.

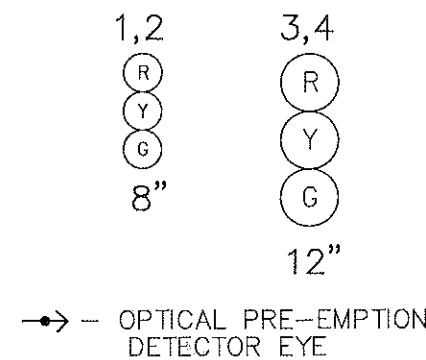
PHASING DIAGRAM

	1	2	3	4
PHASE 2	G	G	R	R
2 CHANGE	Y	Y	R	R
PHASE 4	R	R	G	G
4 CHANGE	R	R	Y	Y
PRE-EMPTION A	G	G	R	R
CHANGE A	Y	Y	R	R
PRE-EMPTION B	R	R	G	G
CHANGE B	R	R	Y	Y
FLASHING OPERATION	FL R	FL R	FL Y	FL Y

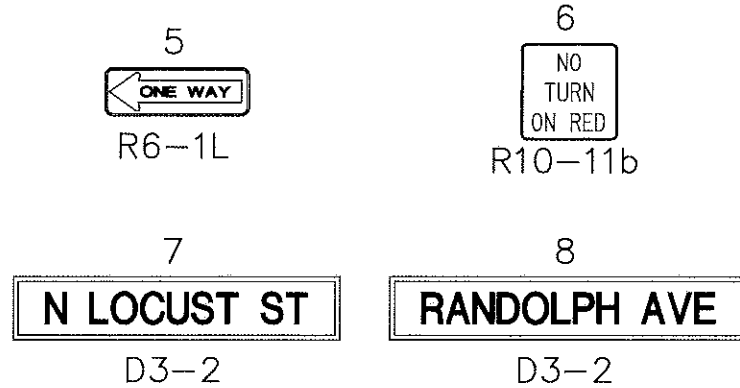
NEMA PHASING



SIGNALS



SIGNS



NOTE: ALL SIGNALS AND SIGNS ARE EXISTING.

EQUIPMENT LISTS

A. EQUIPMENT TO BE SUPPLIED BY THE SHA.				SPECIFICATION SECTION		DESCRIPTION	
QUANTITY	UNIT						
1	EA			SP		BASE MOUNTED LOCAL CABINET (SIZE 5) LESS DETECTION EQUIPMENT WITH 8 PHASE ASC II CONTROLLER WITH TELEMETRY AND OPTICOM PRE-EMPTION MODULE	
B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR.							
QUANTITY	UNIT						
2	CY			205		TEST PIT EXCAVATION	
4	CY			206		REMOVAL OF EXISTING SIDEWALK	
300	SF			610		4 INCH CONCRETE SIDEWALK	
1	EA			816		INSTALL CONTROLLER AND CABINET-BASE MOUNT	
1	EA			811		FURNISH AND INSTALL ELECTRICAL HANDHOLE	
1	EA			SP		FURNISH AND INSTALL ELECTRICAL HANDHOLE (CITY STANDARD)	
1	CY			801		FURNISH AND INSTALL CONCRETE FOR SIGNAL FOUNDATION	
1	EA			SP		FURNISH AND INSTALL CONDUIT BEND IN EXISTING BASE	
40	LF			805		FURNISH AND INSTALL 2" SCHEDULE 80 RIGID PVC CONDUIT-RISER	
50	LF			805		FURNISH AND INSTALL 2" SCHEDULE 40 RIGID PVC CONDUIT-TRENCHED	
25	LF			805		FURNISH AND INSTALL 4" SCHEDULE 40 RIGID PVC CONDUIT-TRENCHED	
80	LF			805		FURNISH AND INSTALL 2" SCHEDULE 80 RIGID PVC CONDUIT-SLOTTED	
1	EA			807		FURNISH AND INSTALL CONTROL AND DISTRIBUTION EQUIPMENT	
1	EA			SP		AS-BUILT FOR TRAFFIC SIGNAL	
2	EA			804		FURNISH AND INSTALL GROUND ROD-3/4 INCH DIAMETER X 10-FOOT LENGTH	
75	LF			810		FURNISH AND INSTALL NO. 6 AWG STRANDED BARE COPPER GROUND WIRE	
175	LF			810		FURNISH AND INSTALL ELECTRICAL CABLE-1 CONDUCTOR (NO. 4 AWG - THHN/THWN)	
250	LF			810		FURNISH AND INSTALL ELECTRICAL CABLE-5 CONDUCTOR (NO 14 AWG)	
225	LF			810		FURNISH AND INSTALL OPTICOM M-138 DETECTOR CABLE	
1	LS			SP		DELIVERY OF SALVAGED EQUIPMENT	
1	LS			SP		REMOVE AND DISPOSE OF EXISTING EQUIPMENT	
1	LS			SP		REMOVAL OF EXISTING SIGNAL EQUIPMENT TO BE SALVAGED	
QUANTITY	UNIT					DESCRIPTION	
1	EA					CONTROLLER AND CABINET	

NOTE: ALL EQUIPMENT AND/OR MATERIALS TO BE REMOVED BY THE CONTRACTOR, BUT NOT LISTED BELOW, SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

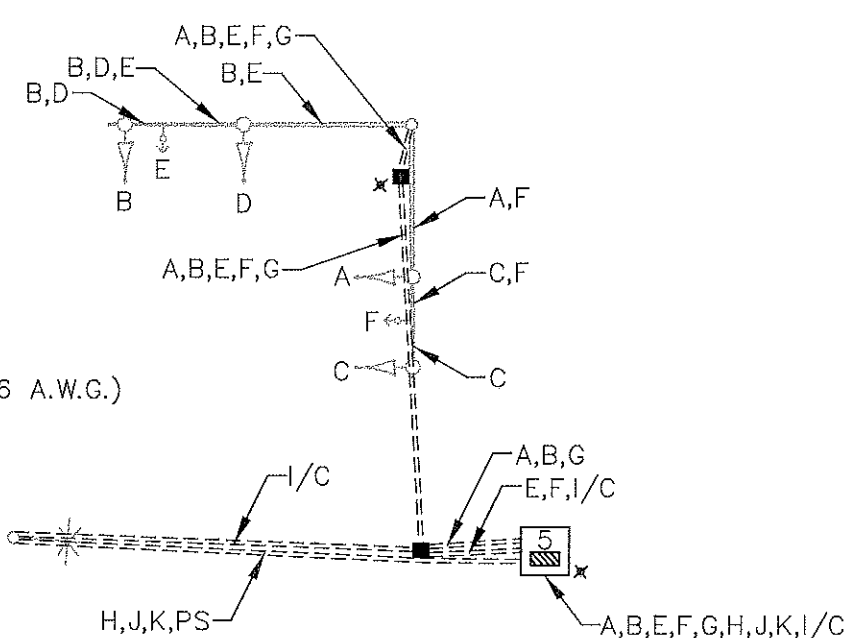
CONSTRUCTION DETAILS

- ALL BASE MOUNTED CABINET, SIZE #5, AND CONTROLLER WITH ALL NECESSARY EQUIPMENT AS SHOWN (NOTE: 2-4", 90-DEGREE P.V.C. BENDS 2-2" 90-DEGREE P.V.C. BENDS).
- ALL 2" P.V.C. (SCHEDULE 40) ELECTRICAL CONDUIT (TRENCHED).
- ALL 2" P.V.C. (SCHEDULE 80) ELECTRICAL CONDUIT (SLOTTED).
- ALL 4" P.V.C. (SCHEDULE 40) ELECTRICAL CONDUIT (TRENCHED).
- ALL 2" P.V.C. (SCHEDULE 80) ELECTRICAL CONDUIT - RISER AND 2" HANDHEAD.
- ALL 2" P.V.C. BEND IN EXISTING BASE.
- EXISTING SIGNAL HEAD.
- ALL HANDHOLE
- ALL HANDHOLE (CITY STANDARD).
- REMOVE AND REPLACE EXISTING SIDEWALK.
- REMOVE EXISTING CONTROLLER AND CABINET FROM TRAFFIC SIGNAL POLE AND INSTALL RUBBER PLUG.
- ALL 10' OF 2" P.V.C. (SCHEDULE 80) ELECTRICAL CONDUIT - RISER AND 25' OF ADDITIONAL CABLE.
- EXISTING OPTICOM DETECTOR.

INTERSECTION DESCRIPTION

- I. GENERAL
THIS INTERSECTION IS NORTH LOCUST STREET AND RANDOLPH AVENUE. CONSTRUCTION AT THIS INTERSECTION INVOLVES THE REPLACEMENT OF THE EXISTING TRAFFIC SIGNAL CONTROLLER AND INTERCONNECTION WITH THE OTHER SIGNALIZED INTERSECTIONS IN THE NEW CITY-WIDE SYSTEM. IT IS ASSUMED THAT RANDOLPH AVENUE RUNS IN AN EAST-WEST DIRECTION.
- II. INTERSECTION OPERATION
THE INTERSECTION WILL OPERATE IN A NEMA TWO (2) PHASE PRE-TIMED MODE. EASTBOUND RANDOLPH AVENUE AND NORTHBOUND NORTH LOCUST STREET WILL OPERATE SEPARATELY.
PRE-EMPTION ON EASTBOUND RANDOLPH AVENUE WILL CALL PRE-EMPTION A. PRE-EMPTION ON NORTHBOUND NORTH LOCUST STREET WILL CALL PRE-EMPTION B.
A NEW EIGHT PHASE FULLY ACTUATED CONTROLLER WITH TELEMETRY MODULE, AND PRE-EMPTION HOUSED IN A GROUND MOUNTED CABINET WILL BE INSTALLED.

WIRING DIAGRAM

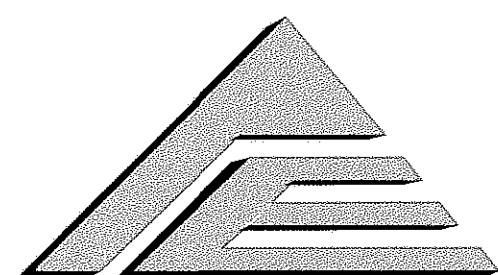


WIRING LEGEND

- A - 5 CONDUCTOR CABLE (NO. 14 A.W.G.)
- B - 5 CONDUCTOR CABLE (NO. 14 A.W.G.)
- C - 5 CONDUCTOR CABLE (NO. 14 A.W.G.)
- D - 5 CONDUCTOR CABLE (NO. 14 A.W.G.)
- E - 3M OPTICOM DETECTOR CABLE, MODEL 138
- F - 3M OPTICOM DETECTOR CABLE, MODEL 138
- G - STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
- H - 1 CONDUCTOR CABLE (NO. 4 A.W.G.)
- J - 1 CONDUCTOR CABLE (NO. 4 A.W.G.)
- K - 1 CONDUCTOR CABLE (NO. 4 A.W.G.)
- PS - 3/4"x10" GROUND ROD
- I/C - PROPOSED ELECTRICAL SERVICE
- I/C - INTERCONNECT CABLE

UTILITY LEGEND

- G - GAS MAIN
- W - WATER MAIN
- S - SEWER MAIN
- STORM DRAIN
- TV - CABLE TELEVISION
- E - ELECTRIC CABLES
- T - TELEPHONE CABLES
- A - AERIAL CABLES



A/E GROUP, INC.
ENGINEERS • PLANNERS
181 E. Main Street
Westminster, Maryland 21158
A/E Job No. 96-317

REVISIONS	APPROVALS
	CHIEF, SIGNAL DESIGN SECTION
	ASST. DISTRICT ENGINEER, TRAFFIC
	CHIEF, TRAFFIC ENGINEERING DESIGN DIVISION
	DIRECTOR, OFFICE OF TRAFFIC & SAFETY

MDOT - STATE HIGHWAY ADMINISTRATION

Office of Traffic & Safety

TRAFFIC ENGINEERING DESIGN DIVISION

LOG ML 21ML0C00.82

DRAWN BY: T. COURVILLE

DES. BY: J. LAWRENCE

CHK. BY:

DATE: 05/30/97

SCALE: 1" = 10'

F.A.P. NO. STPG-218-1(7)E
S.H.A. NO. WA9535185
CITY NO. 07-243-332

TS D. NO. 3710
SHEET NO. 45 OF 66

COUNTY: WASHINGTON

North Locust St. at Randolph Ave.

CITY OF HAGERSTOWN, MARYLAND
ENGINEERING DEPARTMENT

LOCATION: North Locust St. at
Randolph Ave.

TITLE: TRAFFIC SIGNAL UPGRADE

DRAWN BY	A.W. (BASE PLAN)	DATE	8-96
SURVEY BY	A.J.B.	DATE	7-96
SCALES	HORIZONTAL: 1" = 10'	VERTICAL:	-
APPROVED	FILE NUMBER		
DATE			
BY	CITY ENGINEER		

67-054-10